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| 09/942,236 | 08/29/2001 | Richard A. Hillstead | HILL 100 | 9154 |
| 26568 | 7590 | 11/20/2003 | EXAMINER | |
| COOK, ALEX, MCFARRON, MANZO, CUMMINGS & MEHLER LTD SUITE 2850 200 WEST ADAMS STREET CHICAGO, IL 60606 | | | DAVIS, DANIEL J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3731 | |
| | | | DATE MAILED: 11/20/2003 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,236

Applicant(s)

HILLSTEAD ET AL. *CH*

Examiner

D. Jacob Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment A 9/5/03.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30,33-37,40-55,58-65 and 67-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-30,33-37 and 40-52 is/are allowed.
- 6) ☒ Claim(s) 1-13,53-55,58-64 and 68 is/are rejected.
- 7) ☒ Claim(s) 65,67,69 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10, 13, 53-55 and 60-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Pedlick et al. (U.S. 5,018,657). Pedlick discloses a hydraulically actuated medical stapler comprising an elongated shaft **108** (Fig. 2), an end effector (Fig. 5), a handle portion **12**, fluid flow paths **30 and 32**, and extensible balloons **250 and 252**. The balloons **250 and 252** extend circumferentially to actuate the first jaw **200**. The device further comprises first and second articulation joints **20 and 22**, respectively. The fluid flow paths **30 and 32** are made of pneumatic tubing, which is inherently flexible. Since the joint **20** is connected by a pneumatic connection (120), which merely comprises a connection (120) that permits unobstructed rotation, the joint **20** may rotate 360 degrees. Articulation joint **22** moves laterally (Fig. 1).

Claims 64 and 69 are rejected under 35 U.S.C. 102(b) as being anticipated by or in the alternative under 35 U.S.C. 1032(a) as being unpatentable over Christensen (U.S. 5,199,627). Christensen discloses a hammering device for implanting a nail.

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The device is intended to be used for industrial purposes, e.g. roofing or drywalling.

However, it is well accepted that industrial instruments also have application in surgery.

In this case, the device may be used in surgery to implant a nail in bone. Therefore, the device is considered a surgical device.

In the alternative, the device enables nails to be implanted quickly and eliminates multiple impacts. It is advantageous to reduce the time spent in surgery and to minimize the number of times a nail impacts a bone. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Christensen's hammering device during surgery to reduce the time spent in surgery and minimize the number of times the nail impacts a bone.

It might be argued that the device could not practically be used to implant a nail within a bone since the forces applied to the nail are simply too great. Nevertheless, the device can be altered to adjust the nail impact force, as illustrated in Col. 8. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the impact force to accommodate a nail entering bone.

Christensen's device comprises a handle **11**, first and second fluid flow paths (Fig. 3), first and second pressure sources including: a cylinder block **40**, first and second cylinders **402 and 403**, and first and second pistons **412 and 413**. Christensen discloses a means for actuating, including applying an external force to the head (14) of the hammer, which advances the pistons **412 and 413**. Applicants disclose a more extensive means for actuating, including a lever and gear teeth to advance a piston. Despite the differences in the means for actuating, both applicants and Christensen

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effectively advance a piston in response to an external force. In fact, the Christensen device could instead use the means set forth by applicants to advance the piston, and vice-versa. Therefore, the means disclosed by Christensen is considered an equivalent to applicants'.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pedlick in view of Blanco et al. (U.S. 5,348,259). Pedlick fails to disclose a ball and socket articulation joint. Nevertheless, Blanco teaches a stapler having a flexible shaft comprising multiple ball and socket joints **12** (Fig. 1), which enable the user to extensively manipulate the end effector for increased mobility and control. Therefore, it would have been obvious to one of ordinary skill the art at the time the invention was made to modify the Pedlick device by adding a series of ball and socket joints, as taught by Blanco, enhancing mobility and control of the end effector.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pedlick in view of Allen (U.S. 5,381,943). Pedlick fails to disclose a hinge

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articulation joint. Nevertheless, Allen teaches in Fig. 33 a hinge type articulation joint **390**, which is manipulated by a cable **418** (Col. 15, lines 67--et seq.). Allen's hinge joint permits the end effector to be rotated "up and down" (in contrast to Pedlick's end effector, which rotates "side to side"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Pedlick's device, as taught by Allen, to include a hinge type articulation joint that is manipulated by a cable. The obvious modification enables the end effector to be rotated "up and down."

Claims 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pedlick in view of Shichman (U.S. 4,488,523). Pedlick creates hydraulic pressure by releasing pre-compressed gas from a canister into the fluid flow paths **30 and 32**. The patent fails to disclose a connecting linkage and piston to create the hydraulic pressure. Illustrated in Fig. 6, Shichman teaches connecting linkages **248, 252 and 254** to drive a piston **132** to create hydraulic pressure. A linkage and piston pressure applicator enable a user to more selectively control the hydraulic force applied to the end effector. Furthermore, they save time and money that otherwise would be wasted to replace spent canisters. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Pedlick device as taught by Shichman to employ a linkage and piston thereby enabling a user to more selectively control the hydraulic force applied to the end effector and saving time and money by not having to replace spent canisters.

Allowable Subject Matter

Claims 14-30 and 33-52 are allowed.

Claims 65, 67 and 69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Jacob Davis whose telephone number is (703) 305-1232. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Milano can be reached on (703) 308-2496. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9302.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.



DJD

November 14, 2003



MICHAEL J. MILANO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700